Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Part 22 of the Commission's Rules To Benefit the Consumers of Air-Ground Telecommunications Services	)	WT Docket No. 03-103
	)	
Biennial Regulatory Review—Amendment of Parts 1, 22, and 90 of the Commission's Rules	)	

REPLY COMMENTS OF SITA

SITA (Societe Internationale de Telecommunications Aeronautiques) hereby replies to some of the comments on the Federal Communications Commission's ("Commission" or "FCC") Notice of Proposed Rulemaking ("the Notice") seeking to update its Part 22 Rules with regard to the air-to-ground service. As mentioned in its initial comments, SITA is the air transport industry owned and controlled organization that provides network connectivity and applications to all members of the air transport industry. Thus, SITA is highly cognizant of the potential adverse effects on air safety of wireless operations on board aircraft. In addition, as part of its operations, SITA acts as a licensee in providing spectrum-based services to its member airlines. Therefore, SITA is also very much aware of the adverse effects of harmful interference on licensed operations. SITA's initial comments in this proceeding were crafted to take into account the potential effects of on-board handset use on both air safety and potential interference. SITA does not advocate FCC action in this proceeding that would jeopardize either of these critical concerns.

Some of the commenters expressed concern with the potential adverse consequences on air safety of wireless handsets. For example, Cingular Wireless cited studies on the potential for cellphone usage on board aircraft to interfere with the airplane's avionics, and urged the Commission not to change the rule prohibiting on-board usage at this point.[1] As a member of the air transport industry, SITA and its airline members obviously share Cingular Wireless' concern, and would not support use of cellphones on board aircraft if it poses a risk of harm to air safety. As Cingular Wireless recognizes, RTCA – the technical advisory committee to the FAA – is studying this issue,[2] (as is the European group conducting similar evaluations – EUROCAE) and SITA is actively participating in that process. SITA believes that if, but only if, those reviews demonstrate that on-board use of cell phones will not jeopardize air safety, then the Commission could consider eliminating the current restriction in Section 22.925 of the Commission's Rules. Furthermore, SITA would only recommend that any necessary equipment be installed on aircraft if it is fully certified by the FAA.

One alternative being studied by RTCA would involve use of equipment on board the aircraft that would control any cellphones or PCS phones that are turned on inside an aircraft in flight so as to preclude interference to the aircraft's avionics. This could be accomplished by using a monitoring device, transmitting device and an antenna inside the aircraft that would detect any on-board handsets that were turned on, and then transmit a signal on the relevant control channels to direct the handset to operate in the lowest transmission power. This approach of creating the equivalent of an airborne "pico-cell"

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1 Cingular Wireless Comments at pp. 15-16.

2 *Id.* at pp. 16-17.

is being studied currently, and the preliminary results show good promise. While additional study is necessary (including laboratory testing and carefully monitored field tests pursuant to experimental licensing so that there is regulatory oversight of the testing parameters),[3] if proven successful this method would protect against interference to avionics from wireless handsets a passenger attempted to use or left turned on on-board an aircraft in flight.

Several of the comments also expressed concern with the potential for handsets used on-board aircraft in flight to cause harmful interference to terrestrial services operating in the same frequencies.[4] As a wireless licensee, SITA shares those commenters' concerns with regard to harmful interference, and uncontrolled use of conventional handsets on-board aircraft in flight apparently can cause such harmful interference.[5] However, if the use of equipment to control handsets on-board aircraft proves successful in preventing interference to the aircraft's avionics, it may also assist in reducing the risk of harmful interference to terrestrial wireless operations. By directing the handsets to transmit at only the lowest possible power level, the on-board system

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[3] Moreover, as discussed below, such testing must also provide conclusive assurance that the in-cabin operation of pico-cells will not cause electromagnetic radiation to leak from the cabin at a level posing any measurable interference potential to terrestrial cellular networks.

[4] *E.g.*, Cingular Wireless Comments at pp. 7-15; Qualcomm Incorporated Comments at p. 10; Verizon Wireless Comments at pp. 4-10.

[5] *E.g.,* Verizon Wireless Comments at pp. 4-5; Cingular Wireless Comments at pp. 11-14.

should be able to prevent the handsets from causing harmful interference to terrestrial cell sites.[6]

SITA, as a licensee itself, concurs with concerns expressed about such interference. Millions of members of the public rely on terrestrial wireless service, including for safety-related communications, and these communications should not be jeopardized.[7] Airborne cellular phone usage should only be allowed if and when technological solutions to the terrestrial interference issue have been developed and fully tested to ensure that no degradation of terrestrial service will occur.

The terrestrial wireless carriers that expressed concern with interference from use of cell phones on-board aircraft base their fear of harmful interference on their experiences with the AirCell system, which uses cellular spectrum for communications with the aircraft. Indeed, they specifically reference a detailed and extensive study performed by V-COMM, which evaluated the AirCell system and conducted tests to determine the amount of interference that could be caused by such airborne cellular use.[8] SITA does not disagree with the conclusions of the V-COMM study. However, that V-COMM study cited by the terrestrial carriers looked at AirCell's operations using the cellular bands for communications to and from the aircraft, and did not evaluate the

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[6] AirCell, Inc. in its comments at pp. 11-12 also mentioned this possibility. The Cingular Wireless Comments at p. 15 discuss the potential complications with this approach, and SITA recognizes that these issues must be resolved before use of a "control" methodology could resolve the interference concerns. The RTCA review includes examination of such issues, because they also impact potential interference to avionics.

[7] *See* Comments of Verizon Wireless at p. 2.

[8] *E.g.,* Cingular Wireless Comments at p. 9; Verizon Wireless Comments at pp. 5-6.

interference risks that might be caused by handsets operating on-board an aircraft in the very different "controlled" manner as described above. Under its architecture, SITA does not propose use of cellular spectrum for communications to and from the aircraft, but instead would use satellite links for completing calls, and would only allow use of conventional cellular or PCS handsets in a "controlled" manner. Thus, the conclusions from the V-COMM study with respect to harmful interference cannot simply be applied to the potential on-board use of handsets contemplated by SITA.[9]

In sum, if the RTCA and EUROCAE studies conclude that "controlled" use of on-board handsets does not pose any risk to air safety (and in fact eliminates risks posed by "non-controlled" use), and if further studies demonstrate that such use will not cause harmful interference to terrestrial wireless operations, then SITA would urge the

[9] V-COMM's study makes no suggestion that there will be interference caused to terrestrial service from air-ground links using non-cellular spectrum, such as satellite bands. In addition, V-COMM did not study the terrestrial effects of in-cabin transmissions from handsets that are controlled by an on-board pico-cell and thereby kept at the lowest possible power level. SITA recognizes that testing will be required before any conclusions can be made with confidence regarding the potential for interference of such operations.

Commission at that time to consider modifying the current ban in Section 22.925 to allow for such controlled use of handsets on-board aircraft in flight.

Respectfully submitted,

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